



NEW ZEALAND VEGETABLES WORKFORCE STRATEGY & PLAN

2025 - 2030



Te Ahikawariki
Vegetable Industry Centre
of Excellence

FOREWORD

New Zealand's vegetables sector is facing significant challenges as demand for healthy, fresh and processed vegetables continues while requirements on production become stricter. This **Vegetables Workforce Strategy and Plan**, developed with input from growers, product groups, and the capability system, intends to support the sector to come together to consider and resource workforce development. Together, we aim to ensure the sector has a workforce that is fit for purpose and can meet the challenges the sector faces now and in the future.

This Vegetables Workforce Strategy and Plan provides a framework that unifies existing initiatives and looks towards the future. This Strategy and Plan reflects our ongoing efforts to promote capability development, and support growers and their workforce to adapt to change. The vegetables sector will continue to partner with the broader horticulture and food and fibre sectors. However, this plan specifically addresses the unique needs of the vegetable sector. The overarching objective is **to increase the capability (skill) and capacity (productivity) of the vegetables sector so that it can innovate and adopt best practice**. The four priorities outlined in this plan to meet this objective are:



ATTRACT

Increase the number and suitability of people entering the sector



RETAIN

Enhance job satisfaction and career longevity within the sector



UPSKILL

Enhance workforce capabilities through ongoing training and development



EVOLVE

Increase the sustainability of roles by empowering employers to adopt innovative workforce solutions

The key factors providing context to these priorities are:

- **Ensuring safe and healthy food for New Zealand.** The vegetables sector is fundamental to New Zealand's food security, ensuring that local communities have access to safe, nutritious produce. This commitment to food safety and quality extends across the entire supply chain, from farm to table.
- **Expanding export opportunities with high-quality produce.** New Zealand's vegetable growers are increasingly recognised on the global stage, contributing significantly to the country's export economy. By producing high-quality products that meet international standards, particularly in regions such as Southeast Asia and Europe, the sector enhances New Zealand's reputation as a provider of premium produce while supporting economic growth.
- **Advancing sustainable production practices.** As environmental concerns become more pressing, the vegetables sector is dedicated to adopting sustainable practices that minimise the impact on soil health, water resources, and biodiversity. This includes implementing innovative growing techniques and technologies that promote ecological balance and reduce carbon footprints.
- **Embracing evolving technology and skill development.** The rapid advancement of technology in the vegetables sector requires a workforce that is not only highly skilled but also knowledgeable in biological systems and digital innovations. Continuous education and skill development are critical to harnessing these technological advancements.
- **Creating incredible career opportunities.** In 2022, around 11,300¹ people worked in the vegetables industry across the country in a variety of skilled, and well-compensated roles. These jobs often sustain rural communities and contribute directly to the economy.

¹ Workforce Skills. (Accessed April 2025). Vegetables: Workforce. Muka Tangata. <https://mukatangata.workforceskills.nz/explore-industries/vegetables/workforce>

FOREWORD

The vegetables sector is committed to fostering a future workforce that is innovative, prioritises sustainability, and uses collaboration to drive success. We invite you to join us as we work together to cultivate a thriving industry that benefits our communities, economy, and environment.

Nāku noa, nā,



The development of this Workforce Strategy and Plan was made possible by Te Ahikawariki, Vegetables Industry Centre of Excellence (VICE).



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About the Plan

Why was this Strategy and Plan developed?

This Vegetables Workforce Strategy and Plan is a long-term strategy developed as part of Te Ahikawariki (Vegetables Industry Centre of Excellence / VICE). Te Ahikawariki/VICE is a project that has been co-developed by vegetable growers, vegetable product groups (Onions NZ, Tomatoes NZ, Potatoes NZ and Vegetables NZ), Horticulture New Zealand, and mana whenua partners to address gaps in research, extension, and workforce development in the vegetables sector.

New Zealand's vegetables growers play a crucial role in ensuring the country's food security and produce high quality products that are exported around the world. Similar to other areas of horticulture, there is growing pressure to innovate and adopt climate-resilient practices to ensure prosperity of the sector. The continuous change in international requirements and domestic regulations adds to the complexity of these challenges. A skilled, fit for purpose workforce is required now and in the future to sustain the vegetables sector.

What is in the Strategy and Plan?

This Vegetables Workforce Strategy and Plan presents the first shared workforce-focused vision and commitment to action from vegetables industry product groups. The Strategy and Plan:

- Considers the current state of the workforce and the capability development system that supports it. *(Pages 7 - 10)*
- It then provides an overview of the forecast future state of the workforce and how the capability system may meet these changing demands. *(Pages 11 - 18)*
- Driven by data, a strategy for the next five years is outlined that focuses on each area of the workforce pipeline and what the vegetables product groups should focus on to achieve overarching workforce objectives. *(Pages 19 - 20)*
- An action plan, aligned to the strategy is outlined articulating product group and partners initiatives that collectively will achieve the strategy. *(Pages 21 - 27)*
- The sustainable delivery model then outlines how the plan will be resourced including how and when resource will be spent by who to achieve the items in the plan. *(Pages 28 - 29)*
- Monitoring and evaluation mechanisms are outlined including governance of this strategy and plan into the future. *(Pages 30 - 31)*

Alignment to partners

This plan aligns with the strategies of various vegetable sector product groups, as well as broader strategies from the wider industry and related sectors including the [Aotearoa Horticulture Action Plan](#). Various projects from vegetables product groups, Horticulture New Zealand, government agencies, Muka Tangata and the Food and Fibre Centre of Vocational Excellence (CoVE) have been considered in the development. This strategy aims to maximise the limited resource available to the vegetables sector by:

- minimising duplication,
- supporting existing initiatives, and
- focusing in key areas for the vegetables sector.

Horticulture New Zealand has historically supported the vegetables sector extensively with workforce development. This partnership is ongoing and working as 'all of hort' in the majority of areas is still deemed the best approach for vegetables workforce development. Te Ahikawariki has enabled the vegetables sector to form this Strategy, Plan, and establish a range of vegetables specific requirements specific to the vegetables workforce. Moving forward, a sustainable delivery model (see page 28) that leverages this work and partners for ongoing contributions will be important.

About the Plan

Partnership with mana whenua

Te Ahikawariki has reaffirmed the significance of the vegetables sector to Māori, as it is intricately linked to ancestral lands and has historically impacted te taiao (natural world), especially waterways of importance to Māori.

As a project within Te Ahikawariki, this Strategy and Plan, like other projects, has been developed with an understanding of the critical need for partnership with mana whenua to ensure that the sector is sustainable, culturally respectful, and inclusive. By committing to kaitiakitanga—guardianship of the environment—and integrating local Mātauranga Māori, or Māori knowledge and perspectives, the vegetables sector acknowledges its responsibility to mitigate past environmental impacts and foster a more harmonious relationship with the land and its people.

In terms of workforce development, this ongoing partnership between the sector and mana whenua seeks to ensure that the sector supports Māori as growers, learners, educators, workers, and tangata whenua (people of the land), acknowledging their unique role, knowledge, and contributions. The vegetables sector recognises this partnership is a journey, particularly in workforce development, and further work is needed to listen, learn, tautoko (support), and empower Māori within the vegetables sector. This Strategy and Plan intends to evolve in line with this intention.

How the Strategy and Plan were developed

The Vegetables Workforce Strategy and Plan was developed with the support of the VICE People Capability Working Group. This group includes:

- Antony Heywood - Vegetables NZ
- Sheree Phillips - Potatoes NZ
- Kazi Talaska - Onions NZ
- Dinah Cohen - Tomatoes NZ
- Molly Green - Young Grower

Furthermore, the sector was engaged at the Vegetables Big Day Out in Pukekohe on Feb 3-4th, 2025 on the key current and future workforce skills required for the sector. Various engagement with the following groups has occurred throughout this work to inform different aspects:

- Muka Tangata
- Food and Fibre CoVE
- Universities
- Vocational Education Providers
- Private Education Providers
- Wider horticulture workforce representatives



CURRENT STATE

CURRENT STATE OF THE VEGETABLE SECTOR WORKFORCE

11,300 approx

People work in the Vegetables Sector (2022)

\$860 million

Vegetables Sector contribution to New Zealand's GDP (2023).

1,200 approx

Businesses in the NZ Vegetables Sector in (2024)*



Workforce Demographic (2022)

59% are NZ Citizens

55% are European *8% are Māori
32% are Asian*

55% are Male

22% are aged above 54 *22% are 25 to 34
21% are 15 to 24*

Between 2017-2022 there has been an **+29%** Increase in Vegetable qualification enrollments**

+29% Increase in Median Earnings

-15% Decrease in Workforce Size

= We now have a more qualified workforce, with higher pay.

2% of Vegetables Businesses are Māori Owned. (2023).

Top 5 Occupations for 2022

There are around 11,300 people who are employed and self employed (excluding contracting) working in the vegetables industry. The top 5 roles shown to the right make up 53% of this workforce.

Vegetables Grower	16%
Sales Assistant	13%
Vegetables Worker	9%
Mixed Crop Worker	8%
Horticultural Nursery Assistant	8%
Other	47%

Employee seasonality is reducing.

The difference between Summer and Winter has dropped by **over 500** roles between 2019 and 2022.***

(2019 = difference of 2090 roles between December & August, 2022 = 1525 roles).

Exports

In 2023 New Zealand exported **411,000 tonnes** of fresh and processed vegetables. A value of **\$737 Million**. Mainly to Australia, Japan, EU, & Fiji.

Products

Our highest value vegetables in 2021 included Onions (\$144.6m), Peas (\$107.9m), Potatoes (\$99.5m), and Squash (\$71.8m). (in FOB)

The amount of area used by the vegetables industry is diminishing. Between 2012 and 2022 there has been a **-25%** decrease in outdoor hectares planted. And a **-17%** decrease in indoor crop hectares.

Industry Tenure: Around a **39%** of people have worked in the Vegetables sector for longer than 3 years.****

Employee Tenure: Around **46%** of employees are at a job for less than a year.****

Disclaimer

Data has been sourced from Te Mata Raraunga and Muka Tangata's [Industry, Workforce, and Learners Dashboards](#) (2025), [United Fresh "Fresh Facts" \(2024\)](#) And MPI, [Situation and Outlook for Primary Industries Reports \(2024\)](#). The data from these reports has been collected from various sources, and is from various dates, including Stats NZ, and IBISworld studies. Due to this variation, these statistics are for illustrative purposes, and should be considered with their original context. Data definitions and caveats can be found on their websites. Workforce statistics are averaged across the year, and include data on the employed, employers, and those who earn business income from the industry. *This excludes vegetable retailing **This is for workplace based horticulture qualifications with vegetable industry strands. This increase is primarily due to the TTAF fund - see page 14 for details. ***This data has been affected by COVID-19. Future trends may differ. **** Data is an average from 2015 to 2022..

CURRENT CAPABILITY SYSTEM

The current capability development system has challenges

The current state of the workforce capability development system for New Zealand's vegetables sector faces significant challenges due to both structural issues within the education system and the unique characteristics of the sector itself, such as its size and geographical concentration. Significant work has been done by both the sector and the capability system in recent years to improve things, and efforts are continuing. The following outlines the key persistent challenges that the vegetable product groups aim to take action on.

Educational system challenges

- **Schools:**
 - **Curriculum Alignment:** Schools lack industry-specific content and career pathways guidance related to the vegetables sector, hindering students' exposure to careers.
 - **Industry Engagement:** Limited partnerships with the vegetables sector reduce experiential learning opportunities, failing to generate awareness and interest among students.
- **Vocational Education:**
 - **Programme Relevance:** Training programmes are fragmented and outdated, not fully addressing the skill requirements of vegetables growers. This leaves graduates underprepared for industry challenges.
 - **Flexibility and Accessibility:** Rigid delivery modes (either fully work-based or fully in-person) and insufficient learner support make it difficult for individuals to access and benefit from vocational training tailored to the vegetables sector.
- **Universities:**
 - **Research and Development Focus:** University research often misaligns with the sector's immediate needs, focusing on broader or international issues rather than practical applications for vegetables growers.
 - **Graduate Preparedness:** A disconnect in skill development and limited employer engagement results in a gap between university graduates' skills and industry needs.

Sector-specific challenges

- **Size of the Sector:**
 - **Limited Resources and Influence:** As a smaller industry, the vegetables sector struggles with limited resources and influence over education system changes, impacting the availability of targeted training programmes.
 - **Critical Mass for Programmes:** The economic challenge of sustaining specialised programmes for a small workforce leads to insufficient training options.
- **Geographical Concentration:**
 - **Regional Disparities:** Concentration in key regions creates disparities in access to suitable education and training, limiting workforce development in less concentrated areas.
 - **Localised Labor Markets:** The sector's concentration exacerbates recruitment and retention challenges in localised labour markets.

Overall lack of connection and direction

- **Sector Guidance:** The historic absence of a unified strategy and insufficient communication channels between the vegetables sector and educational providers have resulted in missed opportunities for collaboration and innovation.
- **Coordinated Efforts:** Without integrated approaches across schools, vocational education, and universities, the educational pathway for those interested in the vegetables sector remains fragmented.

CURRENT SKILL DEMANDS

Currently demanded skills

Over 150 members of the vegetables sector met at the Vegetables Big Day Out in February of 2025. At this event, attendees were given the opportunity to do a sticker poll on what skills they believe are in demand currently, and what will be needed in 10 years time. Participants were given three stickers to vote for what they found most important. The results of this poll have since been normalised between 0 and 10 over both future and current.

To see how the sector thinks this will change in 10 years time see page 16

Current skill demand themes

- There is a demand for skills that can support adapting to change.
- There is a demand for technology skills.



Rank	Question	Normalised Score
1 	Adopting new technologies	10.0
2 	Problem solving and innovation	9.3
3 	Managing production sustainability	6.4
4 	Leading Effective Teams	5.7
5 	Working with diverse people	3.6
6 	Managing adverse events	3.6
7 	Operating safely	3.6
8 	Operating specialist machinery	2.1
9 	Reporting and meeting compliance requirements	1.4



FUTURE NEEDS

THE FUTURE OF THE VEGETABLE SECTOR

The vegetables sector is shifting to the changing environment, challenging profitability, and increased risks. The workforce will need to continue to adapt to meet these changes.

In 2023 the vegetables sector contributed \$860 million to New Zealand's GDP 2023.

Vegetables sector GDP is expected to increase to near **\$900 million** by 2027

The climate crisis is causing **more significant weather events**, and adverse growing conditions.



The number of employers in the industry is decreasing.

If current trends continue, the number of businesses will decrease by **~8%** between 2021 and 2026 from approximately 1200 businesses to 1100 in 2026*.

We expect the **value of vegetables exports will increase** over time and the proportion of export revenue relative to domestic sales to increase.

We expect a **+17%** increase in export revenue between 2024 and 2026. From \$721 million to around \$840 million.



There has been an **increase in biosecurity incursions**, as well as an increasing impact from existing pests and diseases due to reduction in available control methods.

The Vegetables sector is reducing the number of hectares it grows on by -10% to -20% each year.

Overall, the sector's land usage is consistently decreasing. Despite a reduction in hectares, yields are being maintained. Additionally, farming activities are shifting southward from the Auckland/Waikato region to Canterbury.

Disclaimer: Data has been sourced from Te Mata Raraunga and Muka Tangata's [Industry, Workforce, and Learners Dashboards \(2025\)](#), [United Fresh, "Fresh Facts" \(2024\)](#), and MPI, [Situation and Outlook for Primary Industries Reports \(2024\)](#). The data from these reports has been collected from various sources, and of various dates, including Stats NZ, and IBISworld studies. Due to this variation, these statistics are for illustrative purposes, and should be considered with their original context. Data definitions and caveats can be found on their websites.

*This is using a linear trend from business data 2010 to 2024. Number of businesses excludes retailing (growing, processing and wholesale included).

FUTURE NEEDS

The size of the vegetables sector workforce is decreasing, it is moving to more southern regions, and is less seasonal.



- The size of the vegetables sector workforce has been decreasing since 2016 at a rate of around -3% each year. If this trend continues it can be expected that the workforce would reduce to 10,500 by 2027.*
- This is suspected to be, in part, due to the reduction in the number of businesses operating, and the reduction in hectares being used. Remaining businesses are scaling up and managing seasonal fluctuations more effectively with a smaller relative workforce as they can move workers across a range of crops and tasks.
- It is important to consider the impact Covid-19 had on the workforce, as border restrictions significantly reduced the availability of foreign workers. Because of this it is difficult to accurately forecast workforce trends until more recent data is available and we can see the full impact of border restrictions.

Disclaimer: Workforce size has been sourced from Muka Tangata's [workforce size calculations](#) (2025). Seasonality and Regions are from their [demographic, and tenure dashboards](#). Data definitions and caveats can be found on their websites. Statistics are not official and are for illustrative purposes.

*Workforce size data was last updated in 2023, it is collected over the year, and includes people who earn a wage/salary or business income from the vegetables sector. We have used data up to 2022 due to the lag in data for employers and self-employed. For these reasons this data is for illustrative purposes only. ** Seasonality data was affected by COVID-19 border policies and so this number may vary.

Turnover and seasonality is reducing

We expect the worker turnover rate to fall between 0.5% to 1% per annum. (approximately from a 22.5% turnover in 2021 to 20% in 2027). This means by 2027 there will be approximately 500 less roles across New Zealand that do not need to be replaced between seasons. This implies a reduced seasonality**

Vegetable growing is moving towards the Canterbury, Hawkes Bay, and Horowhenua regions and away from Auckland



FUTURE NEEDS

The vegetables sector workforce is likely to become more qualified, higher paid, and employed to larger operations.

Proportion of Enrolments in Horticulture Qualifications by Source (2023)



- It is difficult to determine exactly how many students are gaining qualifications of direct relevance to the vegetable sector. Programmes that are work-based, and have a vegetable strand are far more likely to be relevant to industry.
- The vast majority of 'provider based' students are enrolled in free 'introduction to horticulture' courses which are more oriented to building home gardening skills and will not likely result in industry ready learners.
- A third of all horticulture qualification enrolments are for workplace based qualifications such as apprenticeships and traineeships (2023).
- Of these workplace based qualifications there are between 25 and 55 students pursuing vegetable specific qualifications each year (between 5 and 20 full time equivalent).
- The amount of these enrolments is slightly increasing over time. This trend is partly due to the effects the Targeted Training and Apprenticeship Fund (TTAF). This fund made the compulsory costs for vocational training for the years affected by COVID-19 (2020-2022) free, therefore increasing enrolments.**



*The median wage has been increasing consistently over time**



2023 vs 2027 Expected Change for top 5 Vegetables sector occupations		Forecast role changes reflect that there are fewer lead growers and instead more workers supporting larger, vegetable-only operations.
Vegetables Grower	-6%	
Sales Assistant	+4%	
Farm Worker	+6%	
Hort Nursery Assistant	+5%	
Mixed Crop and Livestock Worker	-7%	










The number of workers needed in the vegetable industry is decreasing because there are more skilled workers and larger, more efficient machines being used. This is possible because fewer, but larger, businesses can operate on a bigger scale.

Disclaimer: Qualification, enrolment, and median wage data retrieved from [Muka Tangata's Learner Data Dashboards](#) (2025). Top 5 Occupation Change from their [GDP and Occupation Forecasting Tool \(2025\)](#). Data definitions and caveats can be found on their websites. Statistics are not official and are for illustrative purposes. *Median Wage is nominal and has not been adjusted for inflation or consumer price index. ** It is difficult to confirm the rate of increase due to the effects of the TTAF Fund. Regardless the increase in enrolments over time has a small positive correlation of interest.

FUTURE SKILLS

Future expected demanded skills

As outlined earlier, 150+ members of the vegetables sector met at the Vegetables Big Day Out in February of 2025. In addition to being asked what skills were currently demanded (page 11), they were also asked what skills will be demanded in 10 years time.

Rank		Skillset	Score	vs current
1		Managing production sustainability	10.0	+3.6
2		Reporting and meeting compliance requirements	10.0	+8.6
3		Adopting new technologies	7.1	-2.9
4		Managing adverse events	5.0	+1.4
5		Problem solving and innovation	4.3	-5.0
6		Leading Effective Teams	2.9	-2.9
7		Operating specialist machinery	2.9	+0.7
8		Working with diverse people	2.1	-1.4
9		Operating safely	0.0	-3.6

We can see in this response that the skills demanded are going to be about addressing the changing climate and needs of a modern vegetables sector. Scores have been normalised between 0 and 10 for clarity.

Initial Vegetables Skills Framework

Based on the Vegetables Big Day Out engagement and many interviews with stakeholders, a draft Vegetables Skills Framework - aligned with the structure of the Muka Tangata [Food and Fibre Skills Framework](#) - has been developed to support future skill articulation. This will continue to be developed.

Core Transferable Skills

These are foundational skills that can be applied across different roles outside the vegetable sector:

1. **Communication and Teamwork:** Ability to effectively communicate and collaborate with diverse teams and stakeholders.
2. **Problem Solving and Critical Thinking:** Skills to analyse challenges and devise effective solutions.
3. **Leadership and Management:** Competence in leading diverse teams and managing operations efficiently.
4. **Adaptability and Flexibility:** Capacity to adjust to changing conditions, adverse events, and new technologies.

Core Technical Skills

These are skills specifically required for most roles within the vegetables sector:

1. **Basic IT Proficiency:** Familiarity with specific digital tools and software used in various processes.
2. **Data Analysis:** Ability to interpret and utilise production and post-harvest data for decision-making and process optimisation.
3. **Quality Assurance:** Understanding of vegetable quality control measures and protocols.
4. **Inventory and Supply Chain Management:** Skills in managing stock levels and logistics throughout the perishable value-chain.

Specialised Technical Skills

These are industry-specific skills or knowledge unique to the vegetables sector:

1. **Precision Agriculture:** Expertise in using technologies like GPS, drones, and sensors for efficient production management.
2. **Agronomy:** Knowledge of soil management, crop rotation, and plant biology.
3. **Cold Chain Management:** Skills in maintaining product quality through temperature-controlled logistics.
4. **Compliance and Risk Management:** Understanding of legal/assurance requirements and risk assessment in produce.

Bodies of Knowledge

These represent in-depth understanding in key areas relevant to the vegetables sector:

1. **Sustainable Practices:** Knowledge of sustainable growing techniques and environmental impact mitigation.
2. **Regulatory Compliance:** In-depth understanding of industry standards and regulations.
3. **Innovation:** Insight into emerging technologies and their applications in vegetables production and post-harvest.
4. **Market Trends and Consumer Behavior:** Understanding of market dynamics and consumer preferences within and across seasons..

FUTURE OF THE CAPABILITY SYSTEM

Supporting the Future Capability System

To meet these future skill demands for the vegetables sector, the vegetables sector seeks and aims to support through this Strategy and Plan, changes in the capability/education system to better align with industry needs and address current challenges. Here is what the industry would like to see and can advocate and provide support for:

Schools

- **Curriculum Enhancement:**
 - Advocate for and provide resources to integrate industry-specific content and career pathways into school curricula to expose students to the vegetables sector early on.
- **Industry Engagement:**
 - Promote interactions with the industry to provide experiential learning opportunities, such as farm visits and guest lectures, to spark student interest.

Vocational Education

- **Programme Modernisation:**
 - Push for updated training programmes/standards that incorporate the latest technologies and practices relevant to vegetables growers.
 - Advocate for flexible learning options and funding to support these, including online, hybrid, part-time courses to increase accessibility for diverse learners and reduce pressure on time poor employers in work-based learning settings.

Universities

1. **Research Alignment:**
 - Encourage universities to focus research on practical applications and innovations that directly benefit the vegetables sector through providing up to date research needs and industry connections.
2. **Graduate Skill Development:**
 - Promote curricula that equip graduates with practical skills and knowledge relevant to the vegetables sector, ensuring they are job-ready through providing industry case studies, field trip opportunities, and internships.

Sector-Wide Initiatives

- **Unified Strategy and Leadership:**
 - Through this Strategy and Plan provide a clear, unified strategy for workforce development that supports all partners to understand future needs.
- **Improved Communication and Collaboration:**
 - Continue to support HortNZ to advocate for the vegetables sector on 'all of horticulture issues' and engage cohesively on vegetables-specific issues.
 - Use VICE and this Workforce Strategy and Plan to promote regional and national networks to share best practices and resources.
- **Continuation of the RSE (Recognised Seasonal Employer) Scheme**
 - The RSE scheme will continue to be an important part of the workforce Strategy that enables New Zealanders in permanent roles. The sector is committed to advocating for best practices and ongoing enhancements to the scheme to ensure it meets the needs of both employers and workers.
 - The vegetables sector will continue to push for improvements in the RSE scheme, focusing on compliance with minimum standards and ensuring that workers are treated fairly and equitably.

The Action Plan (Page 21) outlines the actions that intend to do this.





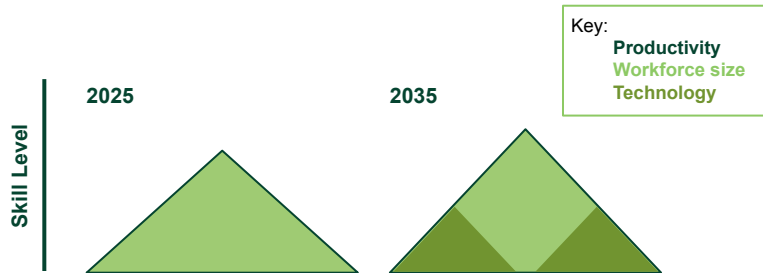
THE GAP

THE GAP

The Vegetables Sector Workforce Strategy and Plan describes the process and means by which the vegetables sector will endeavour to accelerate the transition from the current state to an increasingly productive, sustainable, and technologically driven future state (or 'fill the gaps').

The vision for the future workforce includes being highly skilled and adaptable, with the knowledge and expertise needed to excel in a technologically advanced and environmentally sustainable sector.

As the sector prepares for the future, there is a dual challenge of embracing technological advancements whilst addressing the growing complexities of climate change, market demands and sustainability. To prepare for future technological advancements and challenges, the sector should collectively focus on enhancing workforce skills and attracting new talent with expertise in automation and data management. By investing in training programmes and fostering innovation, the sector can improve its capacity for adopting new technologies while addressing workforce gaps and ensuring sustainable growth.



Above: A conceptual view of how a similarly sized vegetables workforce will increase its productivity through the use of technology.

Technology such as mechanisation, automation, augmentation, and artificial intelligence will continue to take the 'slack' out of the forecasted increase in productivity of the vegetables sector in particular for seasonal and lower skilled roles.

- **The total vegetables workforce size is forecast to decrease slightly over time.**
 - The pipeline of New Zealanders being attracted to the industry will need to increase as the next five years will likely see increased rates of retirement challenged by a 'missing middle' of Gen X. Career changers with experience that is applicable to the sector will be required.
 - School leavers will be required to get suitable qualifications either on the job or through higher study.
 - RSE workers are likely to become increasingly important due to their higher productivity, and ability to work seasonally. They will continue to enable full-time roles for New Zealanders.
- **Skill needs will increase largely due to:**
 - the need to effectively manage, understand and operate automation and technology
 - operating within increasingly complex systems that manage externalities
 - management of growing compliance and market access requirements.
- **What is currently perceived as 'low-skilled' roles will not disappear.**
 - As the adoption of automation is driven by scale, access to capital, and simplicity of the role needed to be automated, some 'low barrier to entry roles' will not be automated by 2030 or even 2040.
 - These will be in areas where the engineering and technological capabilities have not exceeded those of a human and/or the variability in the growing system is too great for a machine to manage.



STRATEGY

VEGETABLE WORKFORCE STRATEGY

Objective: Increase the capability (skill) and capacity (productivity) of the vegetables sector so that it can innovate and adopt best practice.

Priorities:



ATTRACT

Increase the number and suitability of people entering the sector



RETAIN

Improve ability for employers to retain good workers



UPSKILL

Increase access to and engagement with training and upskilling workers



EVOLVE

Increase the sustainability of roles by empowering employers to adopt innovative workforce solution

Current State | 2025

Attract

The vegetables sector struggles to attract highly trained individuals, especially from diverse entry points, and faces a shortage of transferable skills within its workforce.

Upskill

The sector faces challenges in ensuring programmes delivered by education providers are fit for purpose and that these programmes meet future needs.

Retain

Currently, the vegetables sector does not have resource and support to successfully retain a skilled workforce. Ongoing support is needed to recognise the role of supervisors and managers to respond to this issue.

Evolve

Growers recognise the evolving system they operate within and acknowledge the potential for increased technological support, understanding how this can be optimised to drive sector growth.

Desired Future Outcomes | 2030

Attract

The sector successfully attracts highly trained, suitable individuals with transferable skills from a variety of entry points.

Upskill

The sector supports education providers to deliver fit for purpose programmes that address specific needs that align to grower requirements..

Retain

The sector has resource and support that enhances the retention of a skilled workers and empowers the leadership of supervisors and managers.

Evolve

Growers are confidently adopting fit for purpose research and technologies, sharing their expertise with fellow growers, and advocating for wider use throughout the sector.



ACTION PLAN

ACTION PLAN COMPONENTS

Components of the Action Plan

Based on the Strategy articulated for the vegetables workforce, this section summarises what partner organisations have already committed to or anticipate doing under the Plan. The Plan will evolve over time as initiatives are completed, evaluated, evolved or added.

The Plan is structured into the four priorities outlined in the Strategy. Listed below are the different components of the Plan and why they are important:



Priority: This defines the main focus areas that needs attention to achieve the desired outcomes in the Strategy..



Activity: These are the specific actions or initiatives undertaken to address the identified priorities.



Target Group: This is one (or more) of the six target groups identified on the left that are the focus of the action.



Description: This provides detailed information about each activity, explaining how it will be implemented and the resources or programmes involved.



Measure and evidence: These are the metrics and indicators used to assess the success of the activities. This will allow tracking of progress through tangible outcomes and collaborative efforts.



By when and who: This specifies the timeline for completing each activity and identifies the key stakeholders or organisations responsible for execution.

Target groups

The development of workforce actions for the vegetables sector targets a broad spectrum of audiences, each positioned at different stages of the people capability pipeline/priority areas—**attract, retain, upskill, and evolve (future-proof)**. The following outlines these groups and the priority areas that apply to them:

- **School Leavers - Attract:** As potential future workers, school leavers are important for injecting new energy into the vegetables sector. Engaging them early helps secure a sustainable talent pipeline.
- **Secondary Educators - Attract:** Educators influence students' career choices. By equipping them with knowledge about agriculture, they can inspire students to pursue careers in the vegetables sector.
- **Career Changers - Attract and Upskill:** These individuals bring diverse skills and experiences. Attracting and upskilling them addresses specific skill shortages and enhances the sector with mature and adaptable workers.
- **Employers/Growers - Retain, Upskill, and Evolve:** Key to production and workforce management, growers need to retain skilled workers, upskill teams for competitiveness, and adopt innovations for future sustainability.
- **Researchers - Attraction and Retention:** Researchers drive innovation. Attracting them to the vegetables sectors primary research needs can lead to breakthroughs in productivity and sustainability, while retaining them ensures continuity in research efforts.
- **Advisors - Attraction and Retention:** Advisors translate research into practice and influence positive change. Attracting and retaining them ensures high-quality guidance and long-term industry benefits.

THE PLAN

Objective: Increase the capability (skill) and capacity (productivity) of the vegetables sector so that it can innovate and adopt best practice.

1. Attract Increase the number and suitability of people entering and remaining in the sector	2. Retain Improve ability for employers to retain good workers	3. Upskill Increase access to and engagement with training and upskilling workers	4. Evolve Increase the sustainability of roles by empowering employers to adopt innovative workforce solutions
ACTIONS			
1.1 Work across horticulture to update and 'future-proof' a shared online attraction resource - GoHort.	2.1 Support sector-wide retention initiatives and leverage these for the vegetables sector.	3.1 Advocate for and support fit-for-purpose training offerings where need exists in partnership with Vocational Education providers including Te Whare Wānanga and Private Training Establishments.	4.1 Input into and support workforce requirement, composition, capability and capacity planning for the sector and update as needed.
1.2 Create and distribute vegetables-friendly printed and digitally interactive career pathway content.	2.2 Pilot and provide resources to support effective and efficient inductions and onboarding.	3.2 Advocate for and support fit-for-purpose higher education offerings and student/academic research, where need exists, in partnership with Universities.	4.2 Identify and promote areas where technology solutions could help remove the need for manual tasks.
1.3 Develop useable teaching materials for educators on the vegetables sector.	2.3 Investigate opportunities to partner to support improvements in health and safety outcomes.	3.3 Create and promote a resource for employers to plan training and development and consider upskilling options for their employees.	4.3 Develop decision-making frameworks for employers to promote, justify and effectively adopt new workforce innovations.
1.4 Create and promote resources that help employers effectively attract suitable staff and take on interns.		3.4 Pilot effective industry-led leadership development programmes.	4.4 Continue to work on supporting an effective RSE scheme for the vegetables sector.

ACTION PLAN

Priority	Activity	Description	Target Group	Measure and Evidence	By When / By Who
Attract Increase the number and suitability of people entering and remaining in the sector	1.1 Work across horticulture to update and 'future-proof' a shared online attraction resource - GoHort.	<ul style="list-style-type: none"> Collaborate across the horticulture sector to enhance the GoHort platform, including adding a vegetables-friendly printed and interactive horticulture careers pathway. This resource hub aims to attract school leavers, secondary educators, career changers, researchers, and advisors by providing comprehensive career insights and pathways into the vegetables sector. 	School Leavers, Secondary Educators, Career Changers, Researchers, Advisors	Success will be measured by increased engagement metrics (click-through rates, time spent on site) on GoHort by June 2025.	GoHort Working Group (including VICE representative) March 2025
	1.2 Create and distribute vegetables-friendly printed and digitally interactive career pathway content.	<ul style="list-style-type: none"> Develop and distribute career pathway content that is specifically tailored for the vegetables sector, available in both printed and digitally interactive formats. This content aims to engage and inform target groups about career opportunities within the sector. 	School Leavers, Secondary Educators, Career Changers	Track the reach and engagement of the distributed materials by assessing the number of downloads and physical distributions, as well as user feedback.	VICE March 2025
	1.3 Develop useable teaching materials for educators on the vegetables sector.	<ul style="list-style-type: none"> Create comprehensive teaching materials through development of case studies on key growing areas designed specifically for educators to use in a range of classroom/teaching settings. These materials will provide insights into the vegetable sector, including its career opportunities, roles, and industry significance, to inspire and inform students. 	Secondary Educators, School Leavers, Career Changers	Monitor the adoption and utilisation of these teaching materials through educator feedback.	Massey University, PotatoesNZ and VICE Development by June 2025
	1.4 Create and promote resources that help employers effectively attract suitable staff and create internship programmes.	<ul style="list-style-type: none"> Create a quick guide for employers on effective attraction strategies to bring suitable candidates into the vegetables sector, tailored for growers. Develop and promote a simple resource that assists employers in creating successful internship programmes with the aim to retain these interns in the sector. 	Employers/ Growers School Leavers	Evaluate the usage of the resource and feedback from employers through web analytics and pick up at events.	VICE March 2025

ACTION PLAN

Priority	Activity	Description	Target Group	Measure and Evidence	By When / By Who
Retain Improve ability for employers to retain good workers	2.1 Support sector-wide retention initiatives and leverage these for the vegetables sector.	<ul style="list-style-type: none"> Leverage existing retention initiatives within the food and fibre sector to benefit the vegetables sector, focusing on maintaining a stable workforce. 	Employers/ Growers	Monitor retention rates each year.	Ongoing VICE
	2.2 Pilot and provide resources to support effective and efficient inductions and onboarding.	<ul style="list-style-type: none"> Deliver PICMI pilot programme and resources to support effective attraction, inductions and onboarding processes to enhance employee retention. Develop and promote easy to use induction resources including videos. 	Employers/ Growers	Monitor effectiveness of PICMI pilot via feedback surveys and user analytics. Monitor uptake of induction video.	March 2025 VICE - Vegetables NZ leading.
	2.3 Investigate opportunities to partner to support improvements in health and safety outcomes.	<ul style="list-style-type: none"> Work with Worksafe and ACC to investigate opportunities to build on the existing Grow Home Safe project. Develop and promote easy to use health and safety resources, especially videos and potentially upskilling courses that are applicable such as applied first aid. 	Employers/ Growers	Develop shared vegetables sector project plan in partnership Monitor uptake of health and safety resources.	Ongoing VICE

ACTION PLAN

Priority	Activity	Description	Target Groups	Measure and Evidence	By When / By Who
Upskill Increase access to and engagement with training and upskilling workers	3.1 Advocate for and support fit-for-purpose training offerings where need exists in partnership with Vocational Education providers including Te Whare Wānanga and Private Training Establishments.	<ul style="list-style-type: none"> Advocate for a system, programmes / aspects of programmes that meet industry skill and knowledge needs and are flexible, targeted, and relevant. For example, a phytosanitary / export microcredential. Encourage the use of a range of delivery options including the use of technology and on-the-job learning. Advocate for funding mechanisms that make training and upskilling accessible for employers/employees. 	School Leavers, Career Changers, Employers/ Growers	<p>Monitor enrollment numbers in targeted training programmes and gain feedback from growers on what is working versus not.</p> <p>Advocate as needed.</p>	<p>Ongoing</p> <p>VICE, VET System</p>
	3.2 Advocate for and support fit-for-purpose higher education offerings and student/academic research, where need exists, in partnership with Universities.	<ul style="list-style-type: none"> Advocate for programmes / aspects of programmes that meet industry skill and knowledge needs and are flexible, targeted, and relevant. Encourage the use of a range of delivery options including the use of technology and on-the-job learning. Support students in non-vegetables related programmes to apply their degree to vegetables and graduate into roles in industry. Support students to pursue postgraduate studies that are of meaningful value to the sector. 	School Leavers, Researchers, Advisors, Employers/ Growers	Quarterly meetings with Massey, Auckland, Otago and Lincoln Universities through the Vegetables University Working Group and support/connection offered as required.	<p>Ongoing</p> <p>VICE</p>
	3.3 Create and promote a resource for employers to plan training and development and consider upskilling options for their employees.	<ul style="list-style-type: none"> Create 2x resources for employers to effectively plan employee training and development, and to encourage upskilling as a retention strategy. 	Employers/ Growers	Evaluate the usage of the resources and feedback from employers through web analytics and pick up at events.	<p>March 2025</p> <p>VICE</p>
	3.4 Pilot effective industry-led leadership development programmes.	<ul style="list-style-type: none"> Pilot industry-led leadership development programmes to build strong supervisory skills, connect, and support retention within the vegetables sector. Advocate for leadership courses to be included in qualifications frameworks and funded. 	Employers/ Growers	Evaluate programme outcomes through leadership assessments and participant feedback.	<p>March 2025</p> <p>VICE - led by Vegetables NZ, and PotatoesNZ</p>

ACTION PLAN

Priority	Activity	Description	Target Groups	Measure and Evidence	By When / By Who
Evolves: Increase the sustainability of long-term roles in the vegetables sector by empowering employers to adopt innovative workforce solutions	4.1 Input into and support workforce requirement, composition, capability and capacity planning for the sector and update as needed.	<ul style="list-style-type: none"> Support Muka Tangata to develop robust vegetables sector assumptions to improve forecasting tools and ability to understand actual workforce data. Monitor workforce trends annually and adjust strategy and activity plan accordingly. 	Employers/ Growers	<ul style="list-style-type: none"> Annual update on grower's workforce requirements (through forecasts) and current composition is published. 	Ongoing Sector supporting Muka Tangata (and in future ISB)
	4.2 Identify and promote areas where technology solutions could help remove the need for manual tasks.	<ul style="list-style-type: none"> Case studies of effective technological innovations automating previously manual roles are shared. Higher-skilled roles now needed due to the increased automation are also highlighted. 	Employers/ Growers	<ul style="list-style-type: none"> New innovations are frequently published in industry communication channels and to the public. Opportunities including conferences, leadership forums, and online spaces are utilised to share innovation information. 	Ongoing Sector
	4.3 Develop decision-making frameworks for employers to promote, justify and effectively adopt new workforce innovations.	<ul style="list-style-type: none"> Models and business cases of new workforce innovations are developed and published so growers can effectively judge the potential impact on their operation. Advocate with clarity to technology providers what growers needs and preferences are. 	Employers/ Growers	<ul style="list-style-type: none"> Number of useful tools fitting grower needs coming to market. Number of decision making tools developed for commercial ready technology. Use of decision making tools through downloads and pick ups at events. 	Ongoing VICE
	4.4 Continue to work on supporting an effective RSE scheme for the vegetables sector.	<ul style="list-style-type: none"> Continue efforts to support an effective Recognised Seasonal Employer (RSE) scheme, ensuring a reliable seasonal workforce for the vegetables sector. 	Employers/ Growers	<ul style="list-style-type: none"> Evaluate the success of the RSE scheme in meeting labour needs and gather employer and MBIE (Ministry of Business, Innovation, and Employment) feedback on potential improvements the sector can support individual growers with. 	Ongoing VICE, MBIE, Sector



SUSTAINABLE DELIVERY MODEL

SUSTAINABLE DELIVERY MODEL

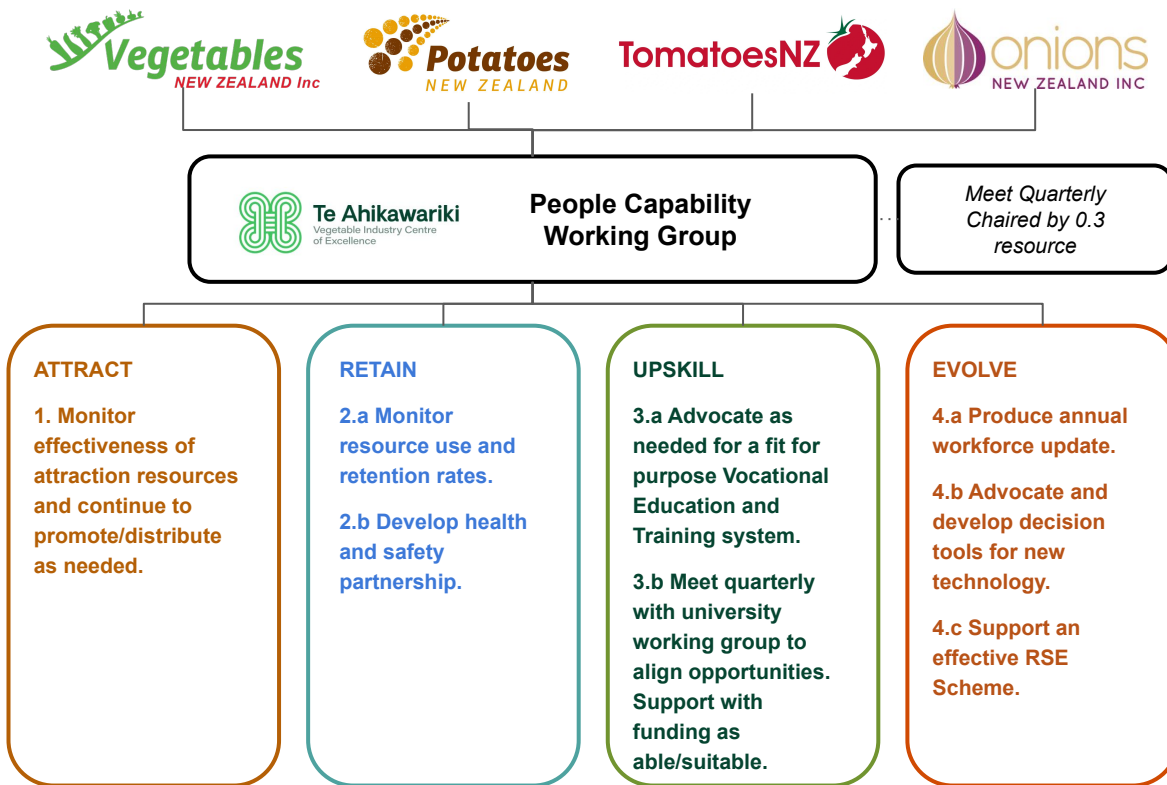
This sustainable delivery model is a structured approach designed to ensure the efficient, effective and long-term implementation of this Strategy and Plan. As mentioned earlier, this plan aligns with the strategies of various vegetable sector product groups, as well as broader strategies from the wider industry and related sectors including the Aotearoa Horticulture Action Plan. Various projects from vegetables product groups, Horticulture New Zealand, government agencies, Muka Tangata and the Food and Fibre Centre of Vocational Excellence (CoVE) have been considered in development.

This strategy aims to maximise the limited resource available to the vegetables sector by:

- minimising duplication,
- supporting existing initiatives, and
- focusing in key areas for the vegetables sector.

Horticulture New Zealand has historically supported the vegetables sector extensively with workforce development. This partnership is ongoing and working as 'all of hort' in the majority of areas is still deemed the best approach for vegetables workforce development. Te Ahikawariki has enabled the vegetables sector to form this Strategy, Plan, and establish a range of vegetables specific requirements specific to the vegetables workforce.

The sustainable delivery model outlined on the right contains specific activities for each of the four priority key areas in the Plan. These activities are expected to require .3 of a suitable FTE per annum to advance. Specific funding for projects, scholarships, and resource development can be adjusted year to year. At the time of writing, \$50,000 is expected to be sufficient.





MONITORING, EVALUATION AND REVIEW

Monitoring, evaluation, and review

Monitoring *(quarterly)*

A simple monitoring framework will be used to effectively monitor and measure the progress of the Vegetables Workforce Strategy and Plan. Measures and evidence are outlined for each action outlined in the Plan. It is suggested that monitoring occurs once per quarter. Updates on each activity in line with the outlined evidence/measure can be collected and shared with the Working Group.

Evaluating *(annually)*

A streamlined reporting mechanism will be implemented to track progress and effectiveness to inform future decision making. This will involve regular data collection and analysis, with minimal administrative burden on stakeholders. Evaluation reports will be generated yearly to provide timely insights into the strategy and plan's implementation, allowing for adjustments to be made as necessary. Evaluations will support updating of budgets and aligned strategies for the following year.

Review *(every three years)*

The Vegetables Workforce Strategy and Plan will be a living document, updated as needed to reflect changes in the sector and the broader economic and regulatory environment. This will ensure that the strategy and plan remains relevant and effective in achieving its objectives. Periodic reviews will be scheduled to assess progress. These reviews are suggested to occur every three years and the Plan will be updated as resource, and actions change over time. Reviews will involve all key stakeholders and will focus on assessing the impact of the strategy, identifying areas for improvement, and setting new priorities as necessary.





CONCLUSION

CONCLUSION

The Vegetables Workforce Strategy and Plan represents a pivotal step forward in ensuring the vitality and sustainability of New Zealand's vegetables sector. Through its framework, the Strategy and Plan addresses the multifaceted challenges and opportunities presented by the evolving agricultural landscape. By prioritising the attraction, retention, upskilling and evolution of the workforce, we are setting the standard for a future that is both innovative and resilient.

Key to this strategy is the sector's commitment to collaboration and partnership, as demonstrated by the involvement of a wide array of stakeholders, including growers, product groups, Horticulture New Zealand, manawhenua partners, government bodies, and education institutions. Together, we are working to ensure that the sector not only meets domestic needs, but also remains competitive globally, with a focus on ensuring safe, healthy, and sustainable food production.

We invite all those interested and involved with the sector to actively engage with this Strategy and Plan, and contribute their insights and support. Your involvement is crucial to the success of this initiative, as it will help drive innovation, improve workforce capabilities, and secure the sector's future. By working together, we can build a dynamic, sustainable vegetables industry that supports our economy, nourishes our communities, and safeguards our environment for generations to come.





Te Ahikawariki

Vegetable Industry Centre
of Excellence